

REMARKS

The Office Action dated September 7, 2005 has been reviewed and carefully considered. Claims 1-40 remain pending, the independent claims remaining 1, 9, 19, 22, 26, 33 and 40. Claim 40 is amended for a typographical error to put the claims in better form for appeal. Reconsideration of the above-identified application, as amended and in view of the following remarks, is respectfully requested.

Claim 40 is objected to for a typographical error which is now removed as suggested in item 3 of the Office Action.

Claims 19, 20 and 25 stand rejected under 35 U.S.C. 102(e) as anticipated by U.S. Patent No. 6,850,488 to Wesley et al. ("Wesley").

Claim 19 recites, "the adjusted rate being a function of said determined bandwidth capacity of said network."

Wesley discloses a conventional system in which a transmitter receives feedback information from a receiver if the receiver experiences congestion, but fails to disclose or suggest the above-quoted aspect of claim 19.

The Wesley receiver determines if the number of packets lost in between predetermined packet sequence numbers x and y exceeds a certain percentage. The range in between x and y, i.e., window, may vary from window to window and is preset in accordance with the frequency with which the sender wants feedback from the receiver. If the certain percentage is exceeded, the receiver declares a congestion condition. In that event, the receiver transmits, as feedback to the sender, a reference packet sequence number, the starting and ending packet sequence numbers, and the feedback information, i.e., whether or not a congestion condition exists. Responsive to being notified of the

congestion condition, the sender adjusts its transmission rate to alleviate the congestion (col. 3, lined 63-67). Accordingly, Wesley adjusts the sender rate in the event of a sufficient number of packets being determined by the receiver as lost in a particular window. In that event of sufficient packet loss, it may be said that Wesley has determined the existence of insufficient bandwidth. Thus, Wesley adjusts the sender rate in the event of insufficient bandwidth, that event being inferred from a level of packet loss having been reached. However, knowing that a particular packet loss rate has been reached does not necessarily imply knowledge of ". . . said determined bandwidth capacity of said network."

Wesley fails to disclose a ". . . determined bandwidth capacity of said network."

In addition, Wesley fails to disclose or suggest that its adjustment, in the event of sufficient packet loss, is to a rate unique for a particular bandwidth capacity of the network. Thus, for example, it is unclear whether Wesley might, as time goes by, make larger adjustments to bring a situation under control, so that the rate would not be unique for a particular bandwidth capacity of the network. In fact, Wesley lacks disclosure or suggestion of determining a bandwidth capacity of the network; all Wesley discloses as knowing is that current bandwidth capacity, whatever it is, is inferred to be insufficient based on a determination that a threshold packet loss rate has been reached.

In particular, Wesley fails to disclose or suggest, "the adjusted rate being a function of said determined bandwidth capacity of said network."

The sentence bridging pages 3 and 4 of the Office Action cites to Wesley claim 1 and to lines 56-67 of column 3 in Wesley. The Office Action seems to suggest

that the Wesley feedback message indicates "the receiver determines the bandwidth capacity of the network by sending a feedback to the sender having information indicating that the capacity of link has been exceeded in the network."

However, inferring, from the number of packets lost, that capacity has been exceeded does not seem to automatically imply that the adjusted rate is "a function of said determined bandwidth capacity of said network."

Nor can the Office Action reasonably be seen as finding refuge in Wesley claim 1.

For at least all of the above reasons, Wesley fails to anticipate the present invention as recited in claim 19.

Nor does there appear to be any obvious reason for modifying Wesley so as to determine bandwidth and create a functional relationship based upon the determined bandwidth.

Claim 20 depends from claim 19, and is therefore patentable over Wesley for at least the same reasons set forth above.

In addition, claim 20 recites, ". . . means for utilizing said congestion feedback information to determine a congestion state in said network."

The Wesley receiver, by contrast, notifies the sender of congestion. Wesley fails to disclose or suggest ". . . means for utilizing said congestion feedback information to determine a congestion state in said network."

Claims 1-3, 5, 8-10, 14-16, 21-23, 26-28, 30, 33, 34, 36, 37 and 40 stand rejected under 35 U.S.C. 103(a) as unpatentable over Wesley in view of U.S. Patent No. 6,577,599 to Gupta et al. ("Gupta").

Claim 22 recites:

if no congestion occurs, said adjusting means increase the number of packets transmitted by said source node at a first rate and at a second rate if a predetermined range of the bandwidth capacity of said network is utilized.

The Office Action acknowledges that Wesley fails to disclose or suggest the above aspect of the present invention, but cites lines 28-39 of column 11 in Gupta for disclosure of the underlined portion in the above quote.

However, this passage seemingly fails to make such a disclosure.

In fact, as seen at the top of page 11 in the Office Action, the Office Action apparently defers from offering a citation to any reference with respect to the claim language, ". . . if a predetermined range of the bandwidth capacity of said network is utilized."

For at least the above reasons, the cited combination of references fails to render obvious the present invention as recited in claim 22.

Reconsideration and withdrawal of the rejection are respectfully requested.

As to claim 1, the Office Action acknowledges that Wesley fails to disclose or suggest steps (d) and (e), but offers Gupta to make up the difference.

The present applicants traverse this suggestion by the Office Action that Gupta makes up the difference. Nor can any reference of record make up the difference.

The "Response to Arguments" section of the Office Action cites to lines 26-39 of col. 11 in Gupta, and to FIG. 3.

This passage, however, relates to conventional feedback processing. Notably, no function is disclosed or implied in this passage, whereas the present claim 1 recites first and second functions in steps (d) and (e), respectively.

Moreover, even if Gupta were to be modified to use a function of the Gupta packet-loss rate, there is no disclosure or suggestion of implementing other than a single function to make the adjustments.

Claim 9 recites, "increasing said sender rate of said source node according to a first function of the determined bandwidth capacity."

It is unclear, for example, how either reference can be said to disclose or suggest a "determined bandwidth capacity."

The primary reference has been addressed above on this point, with respect to claim 19.

The secondary reference, Gupta, assesses whether a determined packet-loss rate is high or low, which is essentially what the primary reference does.

As set forth above with regard to the primary reference, and applicable here to Gupta, knowing that a particular packet loss rate has been reached does not necessarily imply knowledge of the ". . . determining the bandwidth capacity of said network" or imply ". . . increasing said sender rate of said source node according to a first function of the determined bandwidth capacity." which language explicitly appears in claim 9.

Claim 9, therefore, likewise distinguishes patentably over the applied references, for at least the above reasons.

Claim 26 recites, “adjust said sender rate at which said source node is currently transmitting the data according to a first function of the determined bandwidth capacity.”

Claim 26, therefore, likewise distinguishes patentably over the applied references, for at least this reason.

Claim 33 recites, “increase said sender rate of said source node according to a first function of the determined bandwidth capacity.”

Claim 33 likewise distinguishes patentably over the applied references for at least this reason.

Claims 4, 11 and 29 stand rejected under 35 U.S.C. 103(a) as unpatentable over Wesley in view of Gupta and U.S. Patent No. 6,400,686 to Ghanwani et al. (“Ghanwani”).

Claims 4, 11 and 29 depend from base claims 1, 9 and 26, respectively. Ghanwani relates to flow control but cannot make up for the shortcomings in the other references.

Claims 6, 7, 12, 13, 17, 18, 24, 31, 32, 35, 38 and 39 stand rejected under 35 U.S.C. 103(a) as unpatentable over Wesley in view of Gupta and what the Office Action characterizes as admitted prior art on pages 2 and 3 of the present specification (“AAAPA”).

Claims 6, 7, 12, 13, 17, 18, 24, 31, 32, 35, 38 and 39 depend from base claims 1, 9, 19, 26 and 33, respectively. Refuge cannot be found in the applicant’s specification, since the applicant’s specification clearly distinguishes what was known from the above-quoted aspects of the independent claims.

For example, claim 6 recites, ". . . the step (e) further comprises, in calculating said second function, calculating said sender rate raised to a power exceeding unity."

The Office Action cites to equations 3 in the instant specification as disclosure of claim 6, but equations 3 do not disclose or suggest ". . . exceeding unity."

For at least this reason, the rejection is deemed to be invalid.

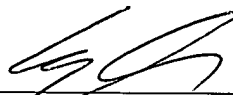
The same analysis applies to other claims rejected on the instant ground.

Reconsideration and withdrawal of the rejection is respectfully requested.

For all the foregoing reasons, it is respectfully submitted that all the present claims are patentable in view of the cited references. A Notice of Allowance is respectfully requested.

Respectfully submitted,

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